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BioConVal (BioConversion to Value) is a R&D project carried out amongst Danish R&D institutes and European SMEs. The project aims at developing and demonstrating an integrated system for cultivating pathogen-free fly larvae (*Musca domestica*) in poultry manure locally at farms, and subsequently use them as dietary supplement for the livestock.

The fly larvae are very nutritious and a natural food source for poultry. They have an amino acid composition that is similar to fishmeal, and which is especially rich on the essential amino acids methionine and cysteine. Among laying hens, the lack of methionine may lower the production and may possibly lead to feather pecking and cannibalism, a problem often seen in organic farming. Feeding live larvae could help overcome these problems; and is furthermore expected to increase gut health and animal welfare and behaviour. Thus, BioConVal provides a sustainable approach to meeting EU requirements for organic farms (100% organic feed in the near future).

Fly larvae have an amazing ability to convert fresh manure to compost in a very short time [1]. However, many factors influence the cultivation of high-quality larvae, e.g. the manure temperature, dosage of fly eggs, humidity, hatchability of fly-eggs, as well as efficient retrieval of the larvae [2] prior to being applied as feed [3]. To address these issues, a number of laboratory and pilot scale tests have been carried out to optimize the system. Our experiences from BioConVal will be disseminated in this presentation highlighting efficiency and scalability, which are key to establishing a commercially viable system.

1 Wang, H, Zhang, Z, Czapar, GF, Winkler, MK, Zheng, J (2013) A full-scale house fly (Diptera: Muscidae) larvae bioconversion system for value-added swine manure reduction. Waste Management & Research 31:223-231.

2 Čičková, H, Kozánek, M, Morávek, I, Takác, P (2012) A Behavioral Method for Separation of House Fly (Diptera: Muscidae) Larvae from Processed Pig Manure (2012) Journal of Economic Entomology 105:62-66.

3 Van Huis, A (2013) Potential of insects as food and feed in assuring food security. Annual Review of Entomology 58:563-583.